

Running head: PROPOSAL FOR DERMATOLOGY CONSOLIDATION

A Proposal for the Consolidation of Dermatology
Services of Walter Reed Army Medical Center
and the National Naval Medical Center

David A. Brant

Baylor University

Report Documentation Page		<i>Form Approved OMB No. 0704-0188</i>
Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.		
1. REPORT DATE AUG 1999	2. REPORT TYPE Final	3. DATES COVERED Jul 1998 - Jul 1999
4. TITLE AND SUBTITLE A Proposal for the Consolidation of Dermatology Services of Walter Reed Army Medical Center and the National Naval Medical Center		
5a. CONTRACT NUMBER		
5b. GRANT NUMBER		
5c. PROGRAM ELEMENT NUMBER		
6. AUTHOR(S) Maj David A. Brant		
5d. PROJECT NUMBER		
5e. TASK NUMBER		
5f. WORK UNIT NUMBER		
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Walter Reed Army Medical Center 6825 16th St, NW, Bldg 2 Washington, DC 20307		
8. PERFORMING ORGANIZATION REPORT NUMBER		
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) US Army Medical Center and School Bldg 2841 MCCS-HRA (US Army-Baylor Program in HCA) 3151 Scott Rd, Suite 1412 Fort Sam Houston, TX 78234-6135		
10. SPONSOR/MONITOR'S ACRONYM(S)		
11. SPONSOR/MONITOR'S REPORT NUMBER(S) 9-99		
12. DISTRIBUTION/AVAILABILITY STATEMENT Approved for public release, distribution unlimited		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT <p>The purpose of this project is to determine if consolidating dermatology services of Walter Reed Army Medical Center (WRAMC) and the National Naval Medical Center (NNMC) at one location will lead to increased efficiency for those beneficiaries seeking dermatological care. Visits to WRAMC for the 12 month period ending June 30th, 1998 totaled 18,937 with an average cost per visit of \$138.55. Patient visits for the same period totaled 15,108 at NNMC and averaged \$238.05 per visit. Though both clinics are cost-effective, more can be done to improve efficiency. Performing a cost-effectiveness analysis allowed other factors such as staffing requirements, Graduate Medical Education, and access to care to be considered in the examination. The study's recommendation is to merge WRAMC and NNMC clinics at NNMC to form one department solely responsible for providing dermatological care to military beneficiaries. Despite the study's overall recommendation, a successful consolidation will be difficult to achieve without major changes to intangible factors that currently exist within the two separate services. For consolidation to succeed, the rigid, service focused cultures must be replaced by philosophies that value flexibility, forward thinking, and the processes for delivering high-quality, cost-effective patient care. All stakeholders in this effort must be susceptible to change and the higher authorities must be willing to accept a level of risk and change the ways of the past. Consolidation efforts are doomed to fail if those entering the mergers lack a clear understanding of why they are doing it. Armed with a willingness to compromise and share accountability, consolidating dermatology services in the National Capital Area is attainable.</p>		
15. SUBJECT TERMS Dermatology, Consolidation, Cost-effectiveness Analysis		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT UU	18. NUMBER OF PAGES 53	19a. NAME OF RESPONSIBLE PERSON
a. REPORT unclassified	b. ABSTRACT unclassified	c. THIS PAGE unclassified			

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

ACKNOWLEDGEMENTS

This project could not have been possible without the support of my family, Nicola, Elliot, and Madeleine, who have not only helped me in this endeavor, but continue to provide me love and moral support in all I do. I also would like to thank the following individuals for their hard work and dedication in assisting me along the way:

Drs. Paul Benson and David Corbett, Chiefs of the Dermatology Service at Walter Reed Army Medical Center and Department of Dermatology at the National Naval Medical Center respectively, for affording me the opportunity to conduct this project.

Ms Juana Garcia, Walter Reed Resource Management Office, for furnishing the financial data that were so crucial to this analysis.

CPT Scott Boyan for granting me access to the ever-important utilization management data that has made this study so much easier.

LTC William Novakoski, my fellow Baylor Resident, who listened ever so attentively and allowed me to vent my frustrations when times were a little tough.

Abstract

The purpose of this project is to determine if consolidating dermatology services of Walter Reed Army Medical Center (WRAMC) and the National Naval Medical Center (NNMC) at one location will lead to increased efficiency for those beneficiaries seeking dermatological care. Visits to WRAMC for the 12 month period ending June 30th, 1998 totaled 18,937 with an average cost per visit of \$138.55. Patient visits for the same period totaled 15,108 at NNMC and averaged \$238.05 per visit. Though both clinics are cost-effective, more can be done to improve efficiency. Performing a cost-effectiveness analysis allowed other factors such as staffing requirements, Graduate Medical Education, and access to care to be considered in the examination.

The study's recommendation is to merge WRAMC and NNMC clinics at NNMC to form one department solely responsible for providing dermatological care to military beneficiaries. Despite the study's overall recommendation, a successful consolidation will be difficult to achieve without major changes to intangible factors that currently exist within the two separate services. For consolidation to succeed, the rigid, service focused cultures must be replaced by philosophies that value flexibility, forward thinking, and the processes for delivering high-quality, cost-effective patient care.

All stakeholders in this effort must be susceptible to change and the higher authorities must be willing to accept a level of risk and change the ways of the past. Consolidation efforts are doomed to fail if those entering the mergers lack a clear understanding of why they are doing it. Armed with a willingness to compromise and share accountability, consolidating dermatology services in the National Capital Area is attainable. With a call for the Military Health System to do more with less consolidation may be the lone key ensuring survivability.

Table of Contents

TITLE PAGE	1
ACKNOWLEDGEMENTS	2
ABSTRACT	3
TABLE OF CONTENTS	4
LIST OF TABLES	5
INTRODUCTION.....	6
CONDITIONS WHICH PROMPTED THE STUDY.....	9
STATEMENT OF THE PROBLEM.....	12
LITERATURE REVIEW.....	12
PURPOSE.....	18
METHODS AND PROCEDURES.....	18
RESULTS	22
DISCUSSION	29
CONCLUSION.....	36
RECOMMENDATION.....	38
APPENDIX - Defense Health Program portion of Program Decision Memorandum 1.....	46
REFERENCES.....	50

List of Tables

Table

1. Top Ten CPT-4 Procedures (WRAMC)
2. Total Costs for clinic operation for the 12 month period (WRAMC)
3. Staff Available in the Clinic (WRAMC)
4. Total Costs for clinic operation for the 12 month period (NNMC)
5. Staff Available in the Clinic (NNMC)
6. TopTen CPT-4 Procedures (NNMC)
7. Proposed Staffing for a Consolidated Clinic

INTRODUCTION

On November 10, 1997, William S. Cohen, the Secretary of Defense, made public the Defense Reform Initiative (DRI). Allied with the Quadrennial Defense Review (which examined national security threats, risks, and opportunities facing the United States) and *Joint Vision 2010*, (which charts a path to ensure that US forces will be able to conduct decisive operations in any environment) the DRI addresses another element of the Department of Defense's (DoD) corporate vision. That vision is igniting a revolution in business affairs within DoD that will bring to DoD management techniques and business practices that have restored American corporations to leadership in the marketplace (Cohen, 1997).

Over the past decade, American businesses have enjoyed some of their largest economic gains by adhering to such themes as reorganization, restructuring, and adopting new business and management practices. DoD is vehemently attempting to mimic these principles. Today, DoD is adopting and adapting to lessons learned in the private sector so that America's Armed Forces maintain their competitive edge in the rapidly changing global security arena (Cohen, 1997).

This type of transformational change will not be easy, nor will it occur over night. Fortunately, DoD and those working as change agents will not have to go at it alone. In his speech regarding the Defense Reform Initiative, Secretary Cohen (1997) suggested four pillars that would guide the change: reengineering, consolidating, competing, and eliminating.

Within the Military Health System (MHS), reengineering is alive and well. Continually rising health care costs, Base Closure and Realignment Commission (BRAC) closures of military bases along with their hospitals, and stagnant healthcare budgets required that the military reengineer its practices and find new ways in providing health care to its beneficiaries.

A major reengineering effort on the part of the MHS was the implementation of TRICARE. Before TRICARE, several demonstration projects were devised to improve access to top-quality medical care, while keeping costs under control. Foremost among these was the "CHAMPUS Reform Initiative" (CRI) in California and Hawaii (Assistant Secretary for Defense, Health Affairs (ASD (HA)), 1998). Beginning in 1988, CRI offered service families a choice of ways in which they might use their military health care benefits. The successful implementation of CRI convinced Defense Department officials the program would be successful nationwide. Wanting to capitalize on such an achievement, DoD used the CHAMPUS Reform Initiative and its success to introduce the TRICARE program.

TRICARE is DoD's regional managed health care program for service families. It is designed to meet the department's medical mission and includes provisions for supplementing military treatment facilities (MTF) with resources and health care professionals from civilian medical organizations (Army Medical Department-AMEDD, 1998). TRICARE allows the military's MTFs to capitalize on the efficiencies inherent to managed care practices, strives for network development, and promotes military readiness.

TRICARE is said to increase flexibility of the MHS by allowing for 'backfill' of military medical personnel who are deployed in military operations. The flexibility of the program would permit collaboration among the military medical departments and partnerships built with civilian health care companies. Other arranged efforts such as strong public-private partnerships, resource-sharing venues, memorandums of agreement, and memorandums of understanding with organizations external to DoD contribute to the durability of TRICARE and the MHS.

TRICARE and other reform initiatives have afforded the MHS the opportunity of becoming better acquainted with other business practices thereby becoming more competitive in the healthcare industry. Additionally, these business practices most often arise when an MTF lacks the volume or expertise to provide the procedure directly and wishes to arrange for the services locally to minimize any inconvenience to its patients (ASD(HA), 1998).

As federal agencies transform themselves from existing to new processes, they must observe the changes in the environment. Government reengineering begins with the business practice reengineering (BPR) model used in private industry (Kwapinski, 1996). However, government reengineering is unique in many ways. It is important to understand these differences and to prepare for them.

Government, unlike its business counterparts, cannot simply alter its missions when environmental changes occur. Additionally, government agencies are subject to greater political executive management and oversight than are private businesses. Their budgets, schedules, program support, product requirements, labor practices, and facilities are controlled by outside forces such as the Executive Office of the President, Congress, mandated public policies, the Judiciary Branch, and other governments (Kwapinski, 1996). Because of election cycles, major political changes are likely to occur every four years, sometimes as often as every two.

As previously mentioned, the Military Health System will play an integral part in DoD's transformation. The MHS must move from a stand-alone organization to one that functions as a virtual and digital organization. It must be a systems organization and benchmark oriented, able to use technology to get greater gain in productivity. The Federal Government must be willing to compete with private industry and reengineer their practices of today to better their standing for tomorrow.

Reform through reengineering and competition within DoD and the MHS continues. However, there are reservations about whether the gains realized by private industry are achievable throughout the federal sector, and particularly the Military Health System. If the MHS seeks significant reform improvements, the pillars of consolidation and elimination must play quintessential roles. For the purpose of this study, I will focus exclusively on the pillar of consolidation.

Conditions Which Prompted the Study

What fuels healthcare organizations with the urge to merge? Why is there such an insistence to just “do something” new? During the first half of 1996, almost 700 agreements to merge or develop into an alliance were made within the healthcare industry. Of the 700 possible deals, over 150 involved hospitals (Lumsdon, 1996). In 1997, hospital deals topped 200, more than double the total of just three years earlier (Blecher, 1998). Not all of these deals will succeed; only time will truly tell of their efforts. However, if history were any indication, an astounding 80 percent will unwind before merging or break up shortly thereafter (Lumsdon, 1996).

The 700 deals aforementioned say nothing of the magnitude of consolidation efforts in progress internal to hospitals or integrated delivery systems. In this ever-changing health care environment, no deliverer of health care is immune from such cost cutting measures.

As with the private sector, the Federal Government, including DoD and the MHS, hear the calls for consolidation. The Military Health System’s need to cut costs, eliminate overlapping services, and become a more efficient establishment has all healthcare executives continuously “rethinking” organizational strategies. Nowhere is this sense of urgency felt more so than in the National Capital Area (NCA).

There have been numerous efforts made in the NCA to consolidate medical services. Agreements exist between the DoD medical centers, Graduate Medical Education (GME) programs are integrated, and a Federal Health Council (FHC) was instituted to shepherd positive working relationships amongst DoD and Veterans Affairs Medical Centers. (The FHC, chaired by the Commander of the Walter Reed Health System consists of the commanders from the NCA's military medical centers and the Director of the District of Columbia Veteran's Affairs Medical Center.) In the past three years alone, no fewer than four major projects have looked at the possibility of further consolidating health services in the area.

Most recently, a Program Decision Memorandum (PDM) has made its way through Health Affairs to the NCA's FHC calling for a renewed interest in consolidation. (The enclosed Appendix is an information paper on the Defense Health Plan portion of the Program Decision Memorandum). This PDM specifically called for Walter Reed Army Medical Center (WRAMC) and the National Naval Medical Center (NNMC) to "consider consolidating all DoD medical facilities and managed care support contractor capabilities in the national capital region." Furthermore, the memorandum put the NCA's military medical leadership on alert and in motion in that if the MTFs do not work towards consolidation, someone will consolidate for them. Ideally, the MTFs internal to the NCA would like to be the masters of their own destiny.

The national capital region and its surrounding area are home to three major military medical centers. Two of the three are Walter Reed Army Medical Center and the National Naval Medical Center. Walter Reed, located in Washington, DC is the Army's largest healthcare facility, and one of the largest in the Department of Defense. Walter Reed has 315 inpatient beds available and has on average 42,241 outpatient visits per month (WRAMC, 1998). The National Naval Medical Center, located in Bethesda, Maryland, continues to build upon its proud naval

medical history, providing comprehensive, quality health care for its beneficiaries from military commands around the world. National Navy has 250 inpatient beds and averages 30,765 outpatients visits every month (NNMC, 1998).

With the PDM providing a sense of urgency, the FHC authorized their Council of Deputies to begin the planning process. The Council of Deputies (COD) consists of nine senior leaders from the NCA's three medical centers. Each medical center has their Deputy Commander for Administration and Clinical Services, as well as their Chief Nurse serve as members. The COD agrees that sub-specialty services have the greatest chance for consolidation due to their individual uniqueness. Furthermore, the sub-specialties have the best probability of yielding savings in the end, rather than attempting to consolidate primary care clinics.

Initially, the COD targeted all specialty services for potential consolidation. One of the services targeted was Dermatology. Service Chiefs at WRAMC and NNMC have expressed an interest in an evaluation of the costs of combining dermatological services between WRAMC and NNMC.

Currently, the dermatology GME program is integrated throughout the NCA, as are many other services and department programs. However, may clinics including dermatology are located at both hospitals. Downsizing pressures, pressures to further reduce staff and the highly competitive environment under TRICARE all dictate positioning NCA resources into a managed care organization. Although the separate services have been proactive in the reengineering process, the possibility of full consolidation of dermatology services for the NCA warrants further analysis.

Statement of the Problem

The study attempts to answer the following research questions: (1) where is the most efficient and most logical location for dermatology services in the NCA, and (2) should the two services continue to operate clinical functions at separate locations?

Literature Review

In 1996, national health care spending surpassed the trillion-dollar mark for the first time. On the other hand, medical inflation was reported to be at its lowest rate (4.4 percent actual and 1.9 percent adjusted for inflation) in 37 years (Health Care Financing Administration (HCFA), 1998). The report on decreasing inflationary costs, was short lived and not to be viewed as a change in precedence. In a recently published Wall Street Journal report entailing the national health expenditure projections for future years, the nation's total spending for health care is projected to increase from its 1996 figure of \$1.04 trillion to an astounding \$2.1 trillion dollars in the year 2007 (McGinley, 1998).

National health care spending growth is expected to accelerate beginning in 1998, growing at an annual rate of 6.5 percent between 1998 and 2001. This is up from the 5.0 percent average annual growth rate that was from 1993 to 1996 (Aston, 1998). (The percentages are pre-inflation adjustments.) Seen as an essential factor in the acceleration of spending is the idea that most cost-savings attributed to managed care programs are tapering off. The savings enjoyed by the medical community and employer sponsored health insurance programs are thought to be a one-time benefit.

Healthcare costs are far from becoming manageable. Medical technology, an increasing reliance on pharmaceuticals for medical treatments and intervention, and offering beneficiaries more services are only a few reasons for the escalation in price. Healthcare economists estimate

that over the next ten years, healthcare spending will grow to 16.6% of the nation's gross domestic product, from 13.6% in 1996 (Freeland, Heffler, and McKusick, 1998).

This continual growth in health care cost is not new to this country. The start and subsequent end of World War II signaled a major change in the delivery and financing of health care in the nation (Williams and Torrens, 1993). With newer advances in medical technology, society demanded more services, accountability, and access to quality care. In the late 1940s and early 1950s, society no longer considered health care a right but a privilege.

In an effort to improve on the overall health status and access to care, the Federal Government enacted two major government programs. Implemented in 1965, Medicare and Medicaid dramatically increased the role of the Federal Government in the financing of medical care (Feldstein, 1994). These two programs, along with other health policy decisions made in the 1960s and 1970s inadvertently caused the cost of health care to explode to proportions deemed unmanageable.

Unmanaged care is no longer affordable. Purchasers of care, both public and private, are unwilling to tolerate the growth in medical costs of the last several years (Kongstvedt, 1996). Cost containment and incremental reform are the prevailing themes of today.

Executives and administrators throughout the medical industry went about combating the rising costs of healthcare by subscribing to managed care principles. Kongstvedt (1996) defines managed care as a system of health care that tries to manage the cost of health care, the quality of that health care, and access to that care. This 'concept' continues to emerge as a viable method of containing health care costs and has had a profound and somewhat lasting influence on the nature and delivery of U. S. health care. The goal of any managed care plan be it a Health

Maintenance Organization (HMO) or a Preferred Provider Organization (PPO) is to eliminate excessive and unnecessary services, thereby keeping health care costs manageable (Ginter, Swayne, and Duncan, 1998).

The number of enrollees in HMOs and other managed care plans continues to expand. In 1997, the number of subscribers exceeded 70 million for the first time. According to the *Interstudy Competitive Edge HMO Industry Report*, HMO membership grew from 9.1 million in 1980 to 70.6 million in 1997 (Grayson, 1998).

Few would argue the fact that managed care and its cost efficiencies fostered the growth of the integrated delivery system (Ginter, et al., 1998). What theoretically began as two sole practitioners combining their efforts in the name of efficiency, has now become a practice in mergers, consolidations, joint ventures, and alliances. Nonetheless, the principles surrounding managed care and integrated delivery systems continue to be embraced by employers as a means of controlling their health care costs.

Gains due to consolidation have not been unique to the private business sector. In the past five years, the operative phrase within DoD has been "do more with less." Physicians, nurses, administrators, and all other hospital employees have come to the realization that doing more with less may be a means of survivability. With the beginning of the Defense Reform Initiative, this 'policy' was formalized. The backbone of the plan included consolidating organizations to eliminate redundancies (Cohen, 1997).

The fundamentals for consolidation in the health care services industry remain firmly in place. In the past ten years, mergers and consolidations received top billing as the direction businesses were taking to make the U.S. economy more competitive. In the United States alone,

it is estimated that 25% of the work force was affected by consolidation activities during the 1980s (Bremner, Rebello, Schiller, & Weber, 1991). Why, then, do so many organizations, including consolidation efforts by federal agencies, continue to fail? It may be that many organizations are not ready to undertake the change brought on by consolidation. Skills are lacking inside many agencies. Unfortunately, this revelation often comes after large investments of time and resources are invested in reengineering (Kwapinski, 1996).

While many hospitals attempt to merge or consolidate, not all succeed. Consolidations fail for many reasons including political issues, unclear agendas, and interference by regulatory agencies due to antitrust concerns (The Advisory Board Company, 1996). Another frequent culprit is organizational incompatibility: different cultures, fearing change, and dissimilar interests often aggravate an already difficult consolidation process. Senge (1990) states that those institutions best able to bind together around a common identity, have a sense of destiny, and share a commitment to reconciling their existing threats will be winners in the era of change and consolidation.

In some cases, consolidation failures center on issues dealing with administrative functions rather than those dealing specifically with clinical responsibility. In a report published by The Advisory Board Company (1996) profiling institutions wanting to merge operations reports typical reasons for mergers failing include: external factors such as consultants that were incompetent or insufficiently experienced to provide proper support, or communication factors, i.e. the business purpose of the merger was unclear. Other reported reasons for failure include having an unclear vision for the consolidated unit, power issues not being resolved, lack of trust or other relationship failures, and blatant mismanagement.

Although consolidation inevitably leads to downsizing, such strategies do not always lead to cost savings. As previously mentioned, promised efficiencies from merging duplicated tasks often fail to materialize. Trimming administrative fat by combining business office tasks, support services, and purchasing is the effortless part. These results yield short-term savings of sometimes minuscule amounts (Blecher, 1998). Dunn (1998) found that larger savings are only found by merging clinical operations. Although combining operations is a more difficult undertaking, the savings are more long term, and of a more significant amount; as much as 20% of the alliances' operation (Dunn, 1998). Saving the big money takes both time and effort since many factors both internal and external to the organization need to be assessed.

A critical determinant beckoning assessment and one that stymies many consolidation efforts if mishandled concerns change (Kotter, 1995). Another is recognizing and then managing the essence of organizational culture (Nash and Everett, 1996). In reality, some organizations are better than others in coping with the challenges inherent to change and culture. Pritchett and Pound (1991) revealed that it is not the planning of physical change that is most challenging for a merger, but the challenge of managing strategically the change process.

Consolidation can be successful and factors critical for success achieved. In banding together, hospitals in both markets can take steps that may alleviate pressures from outside sources in calling for increased efficiencies (Novarro, 1998). Additionally, the organization's management and governance structure must support the proposals. Shortell, Gilles, and Devers (1995) note:

One cannot ask physicians and nurses fundamentally to change the way in which patient care is delivered across the continuum of care to defined populations while maintaining old management and governance structures, steeped in institutional autonomy, that still

emphasize the management of departments, protection of turf, and filling of beds (p.147).

Potential consolidations require administrators to adopt entrepreneurial values such as shared leadership. Building a successful foundation for shared leadership requires forming a common vision, establishing a set of core values, and agreeing upon guiding principles (Coluccio and Havlick, 1998). Honoring each other's cultural differences and inviting participation amongst the separate entities leads to the alliance focusing on the primary objective of the merger which should always be: to enhance the overall health status of the served population.

The theme of shared ownership as a successful factor in potential consolidation efforts is given more credibility in a 1996 Fact Brief published by The Advisory Board Company. The brief states that the key to any success in future collaborations starts with shared ownership (The Advisory Board Company, 1996).

Despite the wide array of literature available for analysis on whether healthcare consolidations are worthwhile or cost effective, little is based on strong empirical evidence. Most literature is anecdotal and based on a small number – or even single- case studies (Charns, 1997). I found no scientific literature addressing specific DoD challenges to implement clinical consolidation. One broad exception was a 1995 case study focusing on NCA consolidation strategies. This account, titled TRICARE Region 1 Integration of Specialty Services Study was conducted under far too many command directed constraints to be of little use for this study (Vector Consultants, 1995). One of the constraints was that some of the specialty areas were required to maintain tertiary care status of the medical centers and should not undergo complete consolidation at one location. Additionally, economic analyses were not goals of this 1995 study.

Purpose

The purpose of this study is to determine if consolidating dermatology services of Walter Reed Army Medical Center and the National Naval Medical Center at one location will lead to increased efficiency for those beneficiaries seeking dermatological care. Due to the scope of this study, it is necessary to examine both qualitative and quantitative factors specific to this topic. Matters which call for a qualitative analysis (i.e. the number of patients seen, available working space, allocated budget, and staffing requirements) will be discussed by comparing the dermatological capabilities of both organizations, as well as the potential effect of outsourcing patients to TRICARE network providers. A cost-effectiveness analysis (CEA) will serve as the guide that examines the study's quantitative matters.

A CEA is an analysis of alternative courses of action, the objective of which is to identify whether the alternative that yields the maximum effectiveness achievable for a given amount of spending, or the alternative that minimizes the cost of achieving a stipulated level of effectiveness. This method is generally used when it is not possible to assign monetary values to benefits (Rada, 1998).

METHOD AND PROCEDURES

Given the purpose of this research, the chosen methodology is that of a case study. The timeframe examined was July 1, 1997 to June 30, 1998. The case study design was the most appropriate method for analyzing data not conducive to statistical analysis (Yin, 1994). Fischer (1995) states that a case study is most typically the structural form of a qualitative or interpretive investigation. It is the preferred means by which a particular policy objective and the specific circumstances of its implementation can be examined and documented in detail (Fischer, 1995). Furthermore, Yin (1994) supports this approach, when a 'how' or 'why' question is being asked

about a contemporary set of events over which the investigator has little or no control. This definition fits neatly with the above-mentioned purpose of the study.

The case study technique provides valuable insight for problem solving, evaluation, and strategy (Cooper and Emory, 1995). Knowledge gained from case study research is deemed different from other research knowledge in four fundamental ways:

- a] Grounded in real-life experience, it is concrete and sensory, rather than abstract
- b] It is contextual
- c] It is dependent on reader interpretation for its development
- d] The reader, rather than the researcher, determines the extent of generalization (Stake, 1981).

Powers and Knapp (1990) suggest a variety of data collection techniques (other than those gained through statistical analysis) that the researcher may select dependent upon the relevance the researcher sees in those specific techniques. The methodology adopted in this study relied primarily on the data collected through interviews with service chiefs and administrative personnel in the departments. Additional data were collected from management analysts from other divisions (i.e. utilization and resource management). Moreover, a financial analysis of the financial data of the services was performed using the Medical Expense and Performance Reporting System (MEPRS) and the Ambulatory Database System (ADS) reports as the primary tools. This methodology provided utilization data (number of visits and cost per visit), staffing data, patient access data, referral patterns, (i.e. the number of referrals made by departments internal to the hospital), and educational requirements that was germane to this study.

Furthermore, the information made available by these essential managers helped in comparing costs per visit for each service. This data was beneficial in determining if a consolidated service was actually feasible.

Other important data sources were the aforementioned Utilization Management office and Managed Care offices at NNMC and WRAMC. These offices allowed for a more thorough look at utilization rates and an analysis of financial data from outside the two MTFs. Moreover, the Managed Care Division of both NNMC and WRAMC provided the beneficiary population for the two hospitals.

The Clinical Operations Division of the North Atlantic Regional Medical Command (NARMC) supplied a population-based staffing and resource management model that determined appropriate staffing requirements for the proposed consolidated clinic. The Regional Uniform Benefits Model (RUBM) links the size and characteristics of the population served and their healthcare needs with the resources employed at each MTF (North Atlantic Regional Medical Command, 1998). The six fundamental elements of the model are:

- 1] Size and characteristics of the user population
- 2] Demand for primary and specialty care, and other services
- 3] Services that should be provided directly versus provided through other delivery options
- 4] Future MTF workloads and expected provider productivity
- 5] Clinical staffing requirements to meet future need
- 6] Clinical space requirements to meet future need

Performing a qualitative analysis permitted me to acutely study the background, status, and the environmental/political interaction of the two hospitals, their dermatology services, and the individuals involved. Conversely, the quantitative cost-effectiveness analysis allowed for a comparison of the two services. CHAMPUS costs of providing dermatological care were also examined for a comparison between costs per patient in the MTFs as compared to costs per patient provided by CHAMPUS physicians. The timeframe examined was identical for the two clinics.

The objective of the cost-effectiveness analysis was to determine which alternative full consolidation or status quo conceded the minimum cost of achieving a stipulated level of effectiveness. The level of effectiveness was to provide efficient, quality dermatology services to the targeted population.

Because of potential investigator bias, construct validity is especially problematic in case study research. Along with establishing a chain of evidence, and having a draft case study report reviewed by essential personnel, Yin (1994) suggests using multiple sources of evidence to increase validity. That said, data were acquired from a number of sources (i.e., organizational records, MEPRS, Utilization Management Office, direct observations, and other documents pertinent to the investigation) with the goal of increasing validity.

Conducting separate open-ended interviews with members of the dermatology services also elevated overall validity. Interviewing a number of persons provided insight into events, corroborated evidence obtained from other sources, and verified the data's authenticity.

A second major criterion for evaluating a measurement tool is reliability. Reliability refers to consistency (Cooper and Emory, 1995). A reliable measure is one that, if applied time after

time, will yield the same result. The data gathered through MEPRS are assumed reliable due to the sources of the data, and the level of consistency amongst the different sources.

RESULTS

The Dermatology Service at Walter Reed Army Medical Center

Walter Reed's Dermatology Service is one of eleven services within the Department of Medicine. Their outpatient clinic offers a full spectrum of medical and surgical skin care for the military beneficiary. Available services include Medical Dermatology, Phototherapy, Laser Surgery, Pediatric Dermatology, HIV Dermatology, Patch Testing, MOHS Micrographic Surgery, and Dermatologic Surgery.

The entire Dermatology Service is located on the first floor of the hospital. Minor surgical and MOHS Micrographic Surgery, ultraviolet treatment, and laser surgery are performed in one of three procedure rooms. All other procedures are accomplished in seventeen treatment/exam rooms. These treatment rooms are fully equipped for biopsies, excisions, dermabrasive surgery, and ultraviolet light therapy (Personal communication, James Warren, January 19, 1999). However, physicians see one patient at a time since only a single exam room is adjacent to the physician's offices. Moreover, many exam rooms double as offices. Since the clinic "shares" many hallways with the Department of Allergy and Immunology, expansion is unlikely without major modifications to infrastructure. (Additionally, the clinic shares the main entry way and front desk with Allergy and Immunology).

All physician offices are collocated within the clinic area. The clinic has a self-contained library filled with dermatology journals and specialty textbooks made available to the staff and residents. In addition to the library, the clinic contains a conference room used for teaching

The total number of clinic outpatient visits for the one year period ending 1 July 1998 was 18,397. This figure was obtained by means of the Ambulatory Data System; a database that tallies visits and provides patient demographic information on all those individuals who visit the clinic. These visits generated 13,685 diagnoses. The clinic had just short of 9,960 users with each patient averaging roughly 1.84 visits.

Codes from the Current Procedural Terminology, 4th Revision (CPT- 4) codebook were used to determine the category of procedure performed inside the clinic. Fifty distinct procedures, totaling 9,348 processes, transpired over the 12-month period. The ten most prevalent patient procedures as reported by CPT-4 codes are listed in Table 1. These surgeries and other dissections explained 78.59% of the total number of procedures performed in the clinic.

The total cost of operating the Walter Reed Dermatology Clinic was \$2,623,645. Costs are computed using a step-down cost accounting method performed by MEPRS. In MEPRS, a series of computations are done to allocate or step-down the expenses of non-revenue producing workcenters (i.e. ancillary services) into revenue producing workcenters (i.e. the clinic's). This ensures each workcenter receives its fair share of such expenses (Medical Expense and Performance Reporting System Division, 1998).

Direct costs are expenditures pertaining to costs directly associated with providing patient care (Berkowitz, 1996). These costs include salaries of the staff and medical/administrative supplies used internal to the clinic. Berkowitz (1996) defines indirect costs as fixed costs that cannot be related to patient care or service. Ancillary departments such as pharmacy, radiology, and hospital overhead are allocated as indirect costs. Costs associated with clinic operations are

annotated in Table 2.

Once all costs are allocated to the clinic via MEPRS, total average costs of providing a visit can be determined. The total cost per patient visit can be calculated by dividing the total costs allocated to the clinic by the total number of visits over the for the 12 month period.

$$\frac{\$2,623,645 \text{ Total clinic costs}}{18,937 \text{ patient visits}} = \$138.55 \text{ Average cost per visit}$$

Moreover, average cost per patient can be calculated using the same method. In this computation, number of patients is substituted for patient visits.

$$\frac{\$2,623,645 \text{ Total clinic costs}}{9,960 \text{ patients}} = \$263.42 \text{ Average cost per patient}$$

Personnel expenses, those expenses directly attributed to staff salaries make up the greatest portion of direct expenses (See Table 2). Staffing requirements are determined by results obtained through a work force requirement determination tool called the Automated Staffing Assessment Model (ASAM) (United States Army Medical Command, 1998). The model, which must be re-validated biannually, is a product of the Army Medical Command. Walter Reed's last assessment was March, 1998.

The Automated Staffing Assessment Model determined the dermatology clinic had a provider requirement of 19 full time equivalents (FTE) of which ten were Army residents. The assessment validated an ancillary or support staff requirement of 11.2 FTEs. Policy allows for rounding the requirement up to 12 FTEs. Listed in Table 3 is the actual unit staffing for the clinic. Current staffing levels fall short of ASAM guidelines due to their shortage of one staff physician and two support personnel.

Of the sixteen residents, five are in their first year of training, four in their second year, and

six were finishing their final year of residency education. Ten of the sixteen were Army

physicians, which supports ASAM policy. In the NCA, Walter Reed and the NNMC participate in an integrated residency training program. Walter Reed's clinic chief also serves as residency program director. The deputy director is an NNMC dermatologist. Future dermatologists rotate between the two hospitals throughout their three-year residency. With the exception of service specific readiness training requirements, equal time is spent at each facility. However, each resident begins their first year with their corresponding service.

Each first and second year resident sees approximately 18 patients per day. On average, patients are seen at twenty-minute intervals. As with any other medical residency program, first year residents see scheduled outpatients and treat them under the direct supervision of a senior resident, or a member of the staff. With the onset of TRICARE, new appointments are on a referral basis only, and patients generally wait an average of one week to be seen. Less than two percent of all appointments in the clinic, go unfilled. Additionally, patient no-show rates run approximately six percent (personal communication, James Warren, January 19, 1999).

The Department of Dermatology at National Naval Medical Center

The National Naval Medical Center's Department of Dermatology furnishes both general and specialized dermatologic medicine. The department, much like its Army counterpart, offers exceptional capabilities and expertise in nearly all areas of dermatology. (Though WRAMC provides Patch Testing and HIV Dermatology services NNMC does not). This includes the treatment of common skin conditions such as acne, dermatitis, psoriasis, vitiligo or alopecia to the more complex laser surgeries and cancer therapies (personal communication, Rosemary Roman, January 21, 1999).

Dermatology services are easily accessible and available in the department's clinic. The

clinic has fifteen available exam rooms for patient consultation. Six are dedicated exam rooms

with the remainder doubling as physician offices. Clinic space is at a premium and rarely goes unutilized. There are three procedure rooms and a single room used for scheduling follow-up appointments. Like WRAMC, the possibility of enlarging the clinic is not feasible without interfering with another service. Adjacent to the clinic and assessable via a shared hallway is the Urology Clinic. To the department's other side lies the General Surgery/Plastic Surgery clinic also accessible using the same shared hallway. Dermatology and Urology share a conference room that is located to the rear of both clinics.

Outpatient visits as determined by the ADS totaled 15,108. The dermatologists brought to light 11,799 diagnoses on this population. Actual users of the Dermatology Department totaled 7,572. Each user of the department averaged just shy of 2 visits per patient (15,108 total visits / 7,572 users). The most common dermatologic ailment diagnosed at NNMC was Acne (ICD-9-CM 706.1). The prevailing procedure was a CPT-4 code 11100, a biopsy of the skin. Table 6 lists the ten most dominant procedures performed at NNMC. These topmost procedures accounted for 83.62% of the 7,363 procedures performed in the clinic.

The Department of Dermatology at the National Navy Medical Center is a stand-alone department allowing the chief to manage what appears to be an inconsequential budget of \$132,057. As is the case with all MTF departments, this budget excludes military compensations and all indirect costs that are not managed at department level. The department's "actual" total cost of operation for the period was \$3,596,383. Total costs are equal to direct costs and the indirect costs associated with clinic operations.

The methodology for obtaining the department's average cost per visit and average cost per patient is identical to that of WRAMC. Table 4 lists the costs associated with clinic

$$\frac{\$3,596,384 \text{ Total clinic costs}}{15,108 \text{ patient visits}} = \$238.05 \text{ Average cost per visit}$$

Personnel costs (a direct cost) bear the greatest burden to the patient equaling just short of \$88 a visit (\$1,325,414 total personnel costs / 15,108 patient visits = \$87.73 per visit). National Navy Medical Center's own staffing model assessment, titled an Efficiency Review, authorizes a full time equivalent requirement for clinic operations of 16 (differing from WRAMC, the number of residents is not part of their assessment). Completed in the summer of 1996, the review allows five of the sixteen FTEs to be physicians with the remainder being ancillary staff. The hospital's analysis of staff workload coupled with a detailed examination of patient demographics supported an increase in the number of physicians by one. The analysis recommended an additional technician as well. Despite the findings, the increase in staffing was not supported by the Navy's Bureau of Medicine and Surgery (BUMED) (personal communication, Janet Byrd, NNMC Resource Requirements Office, February 26, 1999). Table 5 shows the actual staff on hand in the clinic. Note the lack of full-time support employees to assist in clinic operations.

Of the sixteen residents training in the integrated program, six are Naval Officers. When the residents are "in clinic," they see an average of 21-24 patients per day. The variance in the number of patients seen at the two clinics results in the fact that physicians see a patient every 15 minutes at the NNMC as opposed to 20 minutes at WRAMC.

CHAMPUS Cost

Based on the most current data available, the number of NCA beneficiaries eligible for care in the Military Health System is 432,607 (Corporate Executive Information System, 1999).

However, not all of these beneficiaries are actual users of the MHS. Some have private insurance

provided by separate sources while others maintain coverage through a spouse's insurance plan.

Moreover, many simply choose not to use the MHS. Determining the actual number of MHS users throughout the NCA is difficult at best. The number of users is estimated to range between 360,000-380,000 (personal communication, Dr. Kim Marley, Chief, NARMC Clinical Operations Division , February 8, 1999). Since these persons have used the MHS in the past, the likelihood of a repeat visit in the future is much more considerable. Therefore, basing resources and staffing on actual users is more advantageous than using eligible beneficiaries as the foundation.

An analysis of the CHAMPUS data showed 2,332 patients generated 5,793 dermatological visits external to the Military Health System (TRICARE Management Activity – Aurora, 1999). The amount paid for their care received in the CHAMPUS network grossed \$571,955. As expected, total costs of performing these services were significantly lower than both NNMC and WRAMC. However, when excluding indirect costs from MTF total costs, the average cost per patient of \$245.26 compared to \$98.78 for WRAMC and \$186.01 for NNMC is remarkably higher in the civilian sector. (Indirect costs from costs-centers such as pharmacy and clinical or anatomical pathology are not included in CHAMPUS cost figures).

The Military Treatment Facility's low cost per patient may be attributed to their low costs of medical and administrative supplies (See Tables 2 and 4), and high number of visits. (34,045 patient encounters occurred June 30, 1997 through July 1, 1998). The "consortium's" combined personnel costs averaged \$64.15 per visit (\$2,184,054 Total Personnel Costs / 34,045 total patient visits). This figure is not the result of consolidating operations, but the product of

combining personnel costs then dividing the number by total visits. In addition, the figure does not include any effects from economies of scale that would benefit a consolidated effort.

Using NARMC's staffing assessment model, a consolidated clinic could register an equal number of patient encounters, have little effect on the number of diagnoses, and perform an equivalent number of procedures while significantly decreasing personnel costs. To support a user population of 380,000, the model calls for 22 physicians and 18 support staff (12 technicians and six clerical/administrative personnel). The 22 physicians include the 16 residents who are part of the integrated training program.

Total staff is based upon the size and needs of the specific population being served (i.e. the user population). Moreover, graduate medical education and service specific military readiness requirements were taken into account and are included in the aggregate. To maintain a residency training program accredited by the Residency Review Committee, an ideal staff-to-resident ratio of one-to-three must be preserved. All else being equal, (training, readiness, and service specific requirements) a virtual clinic providing dermatologic services to this particular NCA beneficiary population would need seven staff physicians; six and one half **fewer** than what is currently appropriated. Of the seven staff physicians, allowance is made for one FTE (primarily the chief) to work exclusively on issues outside of patient care. Table 7 lists the staffing requirements for the virtual consolidated dermatology unit.

DISCUSSION

During October 1997, Walter Reed Army Medical Center and the National Naval Medical Center integrated their dermatologic residency training programs. The move was seen as a way to trim costs, foster inter-service relationships, and eliminate redundancy between residency programs. Today, most specialty GME programs throughout the NCA continue to be integrated.

However, few if any have actually resulted in lowering overall costs of hospital operations, and due in part to service rivalries inter-service relationships are no better. In an era where every

government agency fights for the same dollar, the goal of the Military Health System must be to eliminate excessive and unnecessary services, thereby enabling the system to do more with less.

Consolidation of specialty clinics was viewed as a means of improving efficiency and truncating costs. Both WRAMC and NNMC have developed successful dermatology services and departments, respectively. Nonetheless, combining these entities may not yield the expected result of improving cost-effectiveness while continuing to offer quality care. A consolidation could potentially be a more costly endeavor due to factors not associated with unit costs. Blending services would almost certainly call for modifications to existing facilities. If no such modifications were made and consolidation was approved, the action could potentially increase costs of providing dermatologic services since not all eligible beneficiaries could be seen in a single clinic.

Earlier integration talks which discussed a National Capital Area Military Health Care System suggested NNMC perform all outpatient services while WRAMC handle all inpatient services. Still, another course of action indicated WRAMC provide outpatient services and NNMC provide inpatient services, a mirror image of the first option. Reaction to these options lead to continual squabble where each institution feared the other because of the size, staffing, and ancillary support of their counterpart's capabilities. Therefore, this analysis developed three alternatives regarding possible consolidation.

The first alternative was to consolidate dermatologic services in its entirety to WRAMC. Conversely, the possibility of combining services at NNMC developed into a second alternative.

The final consideration under study was to maintain the status quo, that being each location would continue providing dermatologic services. Alternative 1 examines the possibility of consolidating operations at WRAMC.

As stated in the results, the average cost of providing services is far less at WRAMC than NNMC or in the civilian sector. Table 2 shows the average cost per visit to be \$138.55 while the average cost per patient is \$263.42. This is almost \$100.00 less than NNMC's average cost per visit of \$238.05 and over \$200.00 less than the average cost per patient. Table 2 also shows an average direct cost of providing care per patient to be \$98.78 which compares favorably to NNMC's \$186.01 or the civilian sector's \$245.26. If cost alone were the deciding factor WRAMC would prevail.

In a cost-effectiveness analysis, other factors need to be assessed. Weimer and Vining (1992) state that a cost-effectiveness analysis is appropriate when not all goals in question can be monetized. In this analysis, other goals include access to care and efficiency of operations.

Regardless of location, a consolidation of dermatologic services would have little or no effect on the integrated residency program; it should increase efficiency in the clinic. Unifying "divisions" may increase efficiency within the unit since travel time between hospitals would be eliminated. Furthermore, ambulatory encounter summaries (ADS sheets) differ with each clinic; combining services eliminates errors committed by residents and standardizes management reports.

The dermatology clinic at WRAMC has twenty fully equipped treatment and procedure rooms. To improve efficiency a proper space utilization analysis is needed. The analysis would allow the study of current and future use of space within the combined clinic. Based on the NARMC model, a maximum of 23 physicians (seven staff and sixteen residents) require

Ideally, physicians should function out of two exam rooms simultaneously thereby reducing the time allocated for room and patient preparation. Future allocation of capital dollars is needed to expand, replace, relocate (i.e., Allergy/Immunology), and/or reconfigure the clinic as to meet space utilization requirements. Moreover, consideration must be made for a modification of the patient waiting area. The current waiting area has room for forty patients which may not be adequate for a fully consolidate clinic.

When analyzing the alternatives one must consider inter-relationships between specialties. Any attempt to consolidate services is sure to have an overwhelming affect on other hospital departments. The reliance on pathology, laboratory services, and pharmacy is understood and momentous. Additionally, an independent 1995 report studying the feasibility of NCA consolidation pointed to a critical dependence with other specialties; namely pediatrics, plastic surgery, and ophthalmology (Vector Consultants, 1995). A more robust pediatrics department and the only inpatient pediatric ward in the NCA may favor a WRAMC site.

The second alternative is that the consolidated dermatology unit should be located in its totality at the National Naval Medical Center. As noted above, pediatric inpatient services and a greater number of sub-specialties are located at WRAMC. That is not to imply that NNMC goes without quality pediatric care. Since pediatric GME is integrated, NNMC continues to offer a wide range of services addressing the younger patient.

Issues favoring this course of action are similar to those of the first alternative. Consolidation in its entirety is possible; however, concessions in the name of efficiency (i.e. a

physician staffing were addressed earlier, but warrant further discussion if alternative two is implemented.

Personnel costs are considerably higher at NNMC than they are at WRAMC despite having fewer staff. A closer examination of the MEPRS data revealed that almost \$1 million in military readiness labor is allocated to the department as a direct cost. With fewer physicians able to support the clinic due to readiness requirements, the department must compensate by increasing staff through borrowed and reserve labor. Absent the large readiness account, NNMC's direct costs are compatible with WRAMC's.

Supporting NNMC as the site of choice is their clinical technician to staff ratio that is just short of one-to-one. For consolidation to be successful, that ratio must be maintained. Assigning WRAMC's support and ancillary staff is likely to improve clinic efficiency, and is a strategy that

supports the staff-to-support ratio aforementioned. This personnel strategy would allow all support and ancillary staff to maintain employment in the combined clinic. As previously mentioned, a consolidated clinic would eliminate six and one half staff dermatologists.

Access has always been about getting the kind of care when one needs it (Fuchs, 1970). Combining clinics would improve patient access to dermatologic care since management would be more apt at matching their supply of medical care to the patient's demand for services.

Satellite clinics and community hospitals under the hospice of the medical centers have a more difficult time obtaining dermatologic services brought on by the mismatch of supply and demand. Increasing staffing levels provides management with a greater amount of flexibility.

Flexibility would not only help solve the access problem, but will aid in supporting service unique military readiness requirements.

Although the supply and demand issue (as it pertains to access) can be handled just as effectively at WRAMC as it can at NNMC, the Navy being located just off a major highway is

more accessible than Walter Reed. This factor carries a lot of weight when management takes into consideration accessibility to care of the patient.

Favoring NNMC as the site of choice is they are a department while WRAMC is a service. Although WRAMC has maintained a greater workload and performed more procedures, being a department carries a larger weight. The NNMC has no services under their control vying for additional resources while WRAMC's dermatology service must compete with ten other services for their department's attention. The dermatology department at NNMC is on a level playing field with the other departments in the hospital. Being a department rather than a service may appear to be trivial, in reality the amount of power and prestige that goes along with the title can not be overlooked.

A final point that sanctions an NNMC site and perhaps the most favorable concerns the earlier integration talks regarding the National Capital Area Military Health Care System. In these discussions, an underlying theme has always had the NNMC responsible for all outpatient services while WRAMC handle all inpatient services. Dermatology is a specialty that deals almost exclusively with outpatient care. Neither WRAMC nor NNMC dermatologists have admitting privileges. The Department of Medicine performs all admissions for both hospitals.

Although there is no official reference to this arrangement in the Office of the Surgeon General's response to OSD(HA) regarding consolidation of medical centers in the NCA, few

would argue against such insight. Armed with this perceptiveness, relocating to WRAMC the “services” (Urology and General/Plastic Surgery) adjacent to NNMC’s dermatology “department” is more easily understood. The Urology and General/Plastic Surgery Services have a greater association with inpatient activities further supporting a relocation.

The final option under consideration is to maintain the status quo. In this case, both Walter Reed Army Medical Center and the National Naval Medical Center would maintain their dermatology services. As the cost analysis has demonstrated, both locations are more cost effective at providing dermatological services than the civilian sector. In the absence of modifications to either facility, maintaining operations at both localities allows for an increase in access to care. Retaining separate sites allows for a better chance at recapturing care currently provided by dermatologists outside the MTFs. Absent any facility modification, furnishing dermatological care to a user population that generates more than 34,000 visits a year is neither possible nor practical. The alternative of allowing care outside the MHS results in an overall increase in total costs to the MHS.

There is a perception that combining dermatology services inevitably leads to costs savings. Although the cost-effectiveness analysis showed that greater than six staff physicians could be eliminated, determining if overall costs would decrease is inconclusive. Blecher’s (1998) suggestion that combining business practices and support activities leads to short-term savings through a more efficient operation is not germane to this report. It is hopeful that combining administrative and ancillary services (i.e. support personnel) potentially would lead to a more efficient operation.

Real savings can only be realized if one service fully merges with the other. Recognizing that significant differences exists in staffing requirements, management information systems, personnel systems, supply functions, and command ideologies, many believe that the consolidation effort simply is not practical. Still, these differences can be overcome making consolidation of the WRAMC and NNMC dermatology specialties possible.

Full consolidation could yield substantial savings to the Military Health System. This would require the two separate organizations work for the good of the healthcare system. Working for the good of the individual service rather than the healthcare system ensures that status quo wins out.

A barrier forbids full consolidation from taking place. This barrier has ironically little concern for cost efficiencies, infrastructures, access, or staffing requirements. The barrier that most favors the status quo is the Service's inability to free their parochial ways and accept change.

With reference to DoD and change, former Chairman of the Joint Chiefs General David Jones said cultivating service traditions endangers tendencies to look inward and to insulate the services against outside changes and challenges (Jones, 1996). On the surface, the MHS appears to provide a very orderly approach. Taking a closer look, one sees a system deeply entrenched in traditions that guard against attempts to change the status quo.

With a need to cut costs, eliminate overlapping services, and become a more efficient system, the MHS is right for consolidation. In spite of that, consolidation does not fit nicely into existing Army or Navy concepts. Consolidation is not something the leadership views as being beneficial. As seen from the leadership's eye, consolidation entails having a winner and a loser.

The eventual winner is the status quo since the passion of each service always wins out over a well-integrated plan. For these reasons alternative 3 is a course of action that can not be discounted.

CONCLUSION

The expectation of this study was to determine if consolidating dermatology services of Walter Reed Army Medical Center and the National Naval Medical Center at one location would

lead to increased efficiency for those beneficiaries seeking dermatological care. An examination of the data lead to three alternatives. A cost-effectiveness analysis showed both WRAMC and NNMC were more cost-effective at providing dermatological services than their civilian counterpart. Additionally, evidence supported a need to consolidate services that would enable the system to operate in a more efficient manner.

The conclusion of this report is it appears that total consolidation of dermatological services would lead to increased efficiency for dermatology patients in the NCA. The analysis also suggests that the National Naval Medical Center be the location of the consolidated dermatology department. Despite these findings, consolidation is unlikely to occur in the near term. This is due to the fact that intangible differences (i.e., merging two cultures into one, and differences in mission and philosophy) are more highly regarded than further attempts at improving efficiency.

There are clear advantages to consolidating dermatology services at one location. Some of these advantages have previously been alluded to in the alternatives. Clinical consolidation will lead to cost savings in the MHS through increases in productivity, improving patient access due to managerial flexibility, and through the elimination of staff (physicians) and infrastructure.

The need to travel between hospitals is eliminated. This allows for a more concentrated residency program. Consolidation also lessens administrative errors committed by residents and standardizes management reports.

Command and control increases with consolidation. The added flexibility brought on by additional ancillary staff bestows upon the department chief a greater opportunity of controlling the clinic's operations. Patient access to satellite clinics becomes more manageable; gains in

efficiency are realized through an increase in productivity, and quality of care is more closely monitored by means of the establishment of consistent standards.

Notwithstanding, the promises of improved efficiency will not be realized if the two services (Army and Navy) do not change their partisan ways. Rigid, service focused cultures must be replaced by philosophies that value flexibility, shared vision and responsibility.

RECOMMENDATION

The recommendation of this study is to continue the efforts to consolidate services. With continual personnel shortages, decreasing budgets, and the call for the Military Health System to do more with less, consolidation may be the only alternative to survival. Today's environment calls for the Army and Navy to look beyond their self-interests, service needs, and parochial ways. Both sides must forego doing what is best for their organizations, and start doing what is best for the healthcare system.

Table 1

TopTen CPT-4 Procedures (WRAMC - for the period 31 June 1997 to 1 July 1998)

CPT-4 Procedure	Number of Encounters
11000 Biopsy of Skin	2336
17000 Destruction of Benign Lesion	1609
17106 Destruction of Vascular Cutaneous Lesion	1146
17002 Destruction of Lesion, 3 rd Lesion	652
11001 Biopsy of Skin, additional Lesion	460
87220 KOH Slide for Fungus	443
96910 Phototherapy	298
11900 Intralesional Injection	264
17304 Moh's Surgery, 1 st stage	211
17001 Destruction of Lesion, 2 nd Lesion	<u>192</u>
Total	7611

Table 2

Total Costs for clinic operation for the 12 month period (WRAMC - for the period 31 June 1997 to 1 July 1998)

Expense	Total Cost (\$)	Cost Per Patient (\$)	Cost Per Visit (\$)
Personnel	858,640	86.21	45.34
Medical Supplies	44,311	4.45	2.34
Other Supplies	27,322	2.74	1.44
Other Direct Costs	53,557	5.38	2.83
Total Direct Costs	983,830	98.78	51.95
Pharmacy	233,589	23.45	12.33
Other Indirect Costs	1,406,226	141.19	74.26
Total Indirect Costs	1,639,815	164.64	86.59
TOTAL	2,623,645	263.42	138.55

Table 3

Staff Available in the Clinic (WRAMC - for the period 31 June 1997 to 1 July 1998)

Position	Number Available
Physicians (Staff)	7
DermaPathology Fellow	1
Physicians (Residents)	16 (integrated program)
Administrative/Support Staff	2
Medical Records Technician	2
Dermatology Technicians	4
Vocational Nurses	2
Total	<u>34</u>

Table 4

Total Costs for clinic operation for the 12 month period (NNMC - for the period 31 June 1997 to 1 July 1998)

Expense	Total Cost (\$)	Cost Per Patient (\$)	Cost Per Visit (\$)
Personnel	1,325,414	175.04	87.73
Medical Supplies	46,662	6.16	3.09
Other Supplies	25,234	3.33	1.67
Other Direct Costs	11,188	1.48	.74
Total Direct Costs	1,408,498	186.01	93.23
Pharmacy	367,830	48.58	24.35
Other Indirect Costs	1,820,056	240.37	120.47
Total Indirect Costs	2,187,885	288.95	144.82
TOTAL	<u>3,596,383</u>	<u>474.96</u>	<u>238.05</u>

Table 5

Staff Available in the Clinic (NNMC - for the period 31 June 1997 to 1 July 1998)

Position	Number Available
Physicians (Staff)	6.5
DermaPathology Fellow	0
Physicians (Residents)	16 (integrated program)
Administrative/Support Staff	2
Medical Records Technician	1 (Volunteer 1 day/wk)
Dermatology Technicians	<u>6</u>
Total	31.5 _____

Table 6

TopTen CPT-4 Procedures (NNMC - for the period 31 June 1997 to 1 July 1998)

CPT-4 Procedure	Number of Encounters
11000 Biopsy of Skin	1897
17106 Destruction of Vascular Cutaneous Lesion	1000
17000 Destruction of Benign Lesion	710
17002 Destruction of Lesion, 3 rd Lesion	663
17001 Destruction of Lesion, 2 nd Lesion	526
11001 Biopsy of Skin, additional Lesion	407
87220 KOH Slide for Fungus	406
11900 Intralesional Injection	301
17304 Moh's Surgery, 1 st stage	124
11402 Excision of Benign Lesion	<u>123</u>
Total	6157

Table 7

Proposed Staffing for a Consolidated Clinic (- for the period 31 June 1997 to 1 July 1998)

Position	Number Available
Physicians (Staff)	7
DermaPathology Fellow	1
Physicians (Residents)	16 (integrated program)
Administrative/Support Staff	6
Medical Records Technician	1 (Volunteer 1 day/wk)
Dermatology Technicians	<u>12</u>
Total	<u>43</u>

Appendix

Defense Health Program portion of Program Decision Memorandum 1

SUBJECT: Program Decision Memorandum, dated August 18, 1998

1. **Purpose.** To provide information on the DHP portion of PDM 1
2. **Facts.**
 - a. The DHP received a net increase in buying power of \$2.4B across the POM. This net effect is the result of an increase in funding of \$76')M and directed implementation of \$1.7B in efficiencies. Advances in Medical Science accounts for \$600M of the \$763M.
 - b. **Directed Efficiencies Include.**
 - Elimination of Milcon at the AMEDD Center & School, a training facility at Camp Bullis, the new Armed Forces Institute of Pathology, & a lab renovation and administrative building construction at the U.S. Army Center for Health Promotion and Preventive Medicine (\$203M)
 - Consolidation of Lead Agents from 11 to 7 and reduce the size of intermediate medical headquarters NLT end of FYOI. Reduces Army manpower by 23 military (22 officer and 1 enlisted) and 24 civilian employees (\$94M).
 - Reductions in Air Force endstrength (1166 officers and 592 enlisted) (\$96M)
 - **By 1 December 1998**, acquire an automated pharmacy IM system to integrate pharmacy information across the MHS regardless of distribution source of the dispensed prescription. By **1 October 1999**, ASD (HA) should mandate the use of system-wide formulary by DoD pharmacies, TRICARE providers and NMOP (\$80M).
 - **By 1 May 1999** consolidate MHS IM/IT execution functions and personnel into a single organization. Reduces Army civilian employees by 32 (\$58M).
 - Inflation Adjustment (\$1.2B).
 - c. **Legislative Proposals.**

- By **15 September 1998**, ASD (HA) must submit proposals to change the TPJCARE standard pharmacy benefit to direct users to the NMOP when clinically appropriate and require Distribution and Pricing Agreement (DAPA) pricing for retail network pharmacies.

d. **Health Care Reengineering.**

- By **22 September 1998**, ASD (HA) must provide the Deputy Secretary of Defense with the terms of reference for the process through which implementation plans will be developed. The proposed implementation plans are due to the Deputy Secretary on **15 February 1999**. Reengineering initiatives include:
 - Reengineer care management, reduce inappropriate variances between current and best practice, implement evidence-based medicine and prevention and other initiatives aimed at optimizing MTF operations.
 - Reduce the administrative costs of TRICARE contracts.
 - Regionalize purchasing and maintenance function.
 - Reduce cross-service duplication (e.g. preventive medicine functions).
 - Consolidate Walter Reed AMC and National Naval Medical Center, considering all DoD medical facilities and MCS contractor capabilities **in** the NCR; consolidate Wilford Hall Medical Center and Brooke Army Medical Center **in** San Antonio, considering all DoD medical facilities and MCS contractor capabilities in the area.
 - Restructure and resize Wright-Patterson, Keesler, David Grant, Eisenhower, and William Beaumont Medical Centers to appropriately sized community hospitals.
 - Improve operations of the Armed Forces Institute of Pathology and institute full reimbursement from outside sources.

e. **Requirements Methodology.**

- (PA&E) in conjunction with USD (P&R) and ASD (HA) evaluate the methods currently used to estimate the DHP resource requirements. Interim report by **16 November 1998** and final report by **1 March 1999** to the Deputy Secretary.

f. Underfunded Program Elements.

- Add funds across the POM to:
 - RPM (\$1.4B).
 - Military unique activities which include: physiological training units, Defense Medical Standardization Board, drug abuse detection labs, Military Blood Program Agency, optical fabrication labs, USAF Armstrong Lab, health facilities offices, Army Medical Material Activities, and Navy Medical Logistics Command (\$204M-FYO-'1-05).
 - Other health activities which include: management headquarters for Regional Lead Agents, Central Medical Labs, Medical Service Squadrons, Air Medical Department Field Procurement Offices, Health Service Data Systems Agency, Navy Health Care Support Offices, and public affairs (\$88M-FYO')-05).

g. New Missions:

- Adds funds across the POM to:
 - Force Health Surveillance, which provides pre and post deployment surveillance of a service member's career (\$62M-approximately \$40M is Army).
 - Global Emerging Infections Surveillance. Army serves as Executive Agent for this Presidential directed program that supports global early recognition and control of emerging infectious diseases that threaten national security (\$54M).
 - Medical Readiness Training Exercises provides funds to the Air Force and focuses on the need to train on modular theater hospital packages with emphasis on Weapons of Mass Destruction training opportunities (\$52M).

h. Transfers.

- Transfers funding and programming responsibility for Army military personnel assigned to OCONUS deployable medical units from the DFIP to Army (\$808M and approximately 2,591 military authorizations).

- Transfer funding and responsibility for C-9 aircraft and associated personnel from the DHP to the Air Force beginning in FYO I (\$668M and approximately 1,305 military personnel authorizations). By **March 15 1999**, ASD (HA), Air Force, and USD (C) provide the Deputy Secretary a study of alternative arrangements for acquiring patient movement services in OCONUS and CONUS.

References

Army Medical Department-AMEDD (1998). Strategic Vision 1998 [WWW document] URL <http://www.armymedicine.army.mil/army-med> (site visited 28 October 1998).

Assistant Secretary for Defense (Health Affairs). (1997, November). *What is TRICARE? An Introduction to TRICARE* [WWW document]. URL <http://www.ha.osd.mil/tricare/beneficiary/what.html> (site visited 14 Sep 1998).

Assistant Secretary for Defense (Health Affairs). (1997, November). *Military Health System Healthcare Reengineering: Business Practice Reengineering*. [WWW document]. URL <http://www.ha.osd.mil/hcr/hcrhome.html> (site visited 18 Sep 1998).

Aston, G. (1998, September). Medical Inflation returns, hiking health spending. American Medical News, (1) 1-4.

Berkowitz, E. (1996). Essentials of Health Care Marketing. Gaithersburg, MD: Aspen Publishers, Inc.

Blecher, M. B. (1998). Size Does Matter. Hospitals & Health Networks, 72 (12), 28-30, 32, 34-36.

Bremner, B., Rebello, K., Schiller, Z., & Weber, J. (1991). The Age of Consolidation, Will Mega Mergers Really Make the US Economy More Competitive? Business Week, 36, 86-94.

Charns, M. (1997). Organization Design of Integrated Delivery Systems. Hospital & Health Services Administration, 42(3), 411-433.

Cohen, W. (1997, November 10). *Defense Reform Initiative Report* [WWW document]. URL <http://www.defenselink.mil/pubs/dodreform/index.html> (site visited 17 September 1998).

Coluccio, M., & Havlick, K. (1998). Shared Leadership in a new Merged Medical Center. Nursing Administrative Quarterly, 22(2), 36-40.

Cooper, D., & Emory, C. (1995). Business Research Methods (5th ed.). Chicago: Irwin.

Corporate Executive Information System. (1999). Beneficiary Population Profile for FY Ending 1998. Washington, DC.

Dunn, P. (1998). Is Bigger Always Better? It Depends. Materials Management in Health Care, April (1998), 25-30.

Feldstein, P. (1994). Health Policy Issues: An Economic Perspective on Health Reform. Ann Arbor, MI: AUPHA Press/Health Administration Press.

Fischer, F. (1995). Evaluating Public Policy. Chicago: Nelson-Hall, Inc.

Freeland, M., Heffler, S., McKusick, D., & the Health Expenditures Project Team (1998). The Next Ten Years of Health Spending: What Does the Future Hold? Health Affairs, Sep/Oct(1), 22-35.

Fuchs, V. (1974). Who Shall Live? Health, Economics, and Social Choice. New York: Basic Books.

Ginter, P., Swayne, L., & Duncan, W. J. (1998). Strategic Management of Health Care Organization (3rd ed.). Malden, MA: Blackwell Business.

Grayson, M. A., (1998). Managed Care, The 100 Largest HMOs. Hospital & Health Networks, 72, 38-40.

Health Care Financing Administration (1998, January 6). *Highlights, National Health Expenditures for 1996* [WWW document]. <http://www.hcfa.gov/stats/nhe-oact/hilites.html> (site visited 2 October 1998).

Jones, D. C., (1996). Past Organizational Problems. Joint Forces Quarterly, (Autumn), 23-28.

Kongstvedt, P. R. (1996). The Managed Health Care Handbook (3rd ed.). Gaithersburg, MD. Aspen Publishers, Inc.

Kotter, J. P. (1995). Leading Change: Why Transformation Efforts Fail. Harvard Business Review, 59-67.

Kwapinski, M. (Ed.). (1996). Government Business Process Reengineering (BPR) Readiness Assessment. Washington, DC: US General Services Administration, Office of Government-wide Policy .

Lumsdon, K. (1996). Deals that Went Down the Drain. Hospitals & Health Networks, 70 (22), 20-24.

McGinley, L. (1998, September 15). U.S. Health Costs Will Double by 2007 to Over \$2.1 Trillion, Study Projects. Wall Street Journal, pp. A1, A4.

Medical Expense and Performance Reporting System Division. (1998). Medical Expense and Performance Reporting System (MEPRS) Helpful Hints Guide. Unpublished Manuscript.

Nash, M. G., & Everett, L. N. (1996). Cultural Cohesion Versus Collision: A Model for Facilitating Organizational Mergers. Journal of Nursing Administration, 267-8), 11-18.

National Naval Medical Center. *National Naval Medical Center: History of the National Naval Medical Center* [WWW document]. URL <http://www.nmmc.med.navy.mil/history.html> (site visited 15 Sep 1998).

North Atlantic Regional Medical Command (1998). Report on the Regional Uniform Benefits Model Methodology for the United States Army North Atlantic Regional Medical Command. Washington, DC: The Bristol Group, Inc.

Novarro, L. (1998). Can Mergers save these Markets? Hospitals & Health Networks, 72(4), 72,74,76.

Powers, B. A. & Knapp, T. R. (1990). A Dictionary of Nursing Theory and Research. Newbury Park: Sage Publications.

Pritchett, P. L., & Pound, R. (1991). Business as Usual: The Handbook for Managing and Supervising Organizational Change. Dallas, TX: Pritchett Publishing Co.

Rada, R. *Medical Informatics Vocabulary* (October 1998). [WWW document]. URL http://www.uni-koeln.de/med-fak/acm_cdrom/mivoc/mivoc.htm (site visited 2 October 1998).

Senge, P. (1990). The Fifth Discipline: Mastering the Art and Practice of the Learning Organization. New York: Doubleday.

Shortell, S. M., Gillies, R. R., & Devers, K. J. (1995). Reinventing the American Hospital. Milbank Quarterly, 73(2), 131-160.

Stake, R. E. (1981). Case Study Methodology: An Epistemological advocacy. Minneapolis, MN: Minnesota Research and Evaluation Center.

The Advisory Board Company. (1996). Integrated Systems: Road Map of a Merger [Brochure]. Washington, DC: Author.

TRICARE Management –Aurora. Health Summary Reports (June 1998). [WWW document] URL <http://www.ochampus.mil> (site visited 7 February 1999).

United States Army Medical Command. (1998). Automated Staffing Assessment Model (ASAM) [Brochure]. Ft Sam Houston, TX: Anonymous.

Vector Consultants (1995, October). TRICARE Region 1 Integration of Specialty Services Study. (Issue No. DSID3-1.02FR95-1 R.01). Washington, DC: Fissel, T., Reehil, K., & Vancouver, L.

Walter Reed Army Medical Center. *Walter Reed Online Visitor Center: Mission, Vision, Values* [WWW document]. URL <http://www.wramc.amedd.army.mil/welcome/misvisval.htm> (site visited 15 Sep 1998).

Weimer, D., & Vining, A. (1992). Policy Analysis: Concepts and Practice (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.

Williams, S. & Torrens, P.N. (1993). Introduction to Health Services (4th ed.). Albany, NY: Delmar Publishing.

Yin, R. (1994). Case Study Research: Design and Methods (2nd ed.). Beverly Hills, CA: Sage Publishing.

Zuckerman, H., Kaluzny, A. (1991). Strategic Alliances in Health Care: The Challenges of Cooperation. Frontiers of Health Services Management, 7(3), 4.